

ORIGINAL



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MEMORANDUM

2013 SEP 18 P 3:02

TO: Docket Control

FROM: Steven M. Olea  
Director  
Utilities Division

AZ CORP COMMISSION  
DOCKET CONTROL

DATE September 18, 2013

RE: STAFF REPORT FOR HUMBOLDT WATER SYSTEMS, INC.'S  
APPLICATIONS FOR A RATE INCREASE AND AUTHORIZATION FOR  
APPROVAL OF A FINANCING (DOCKET NOS. W-02197A-13-0115 and W-  
02197A-12-0410)

Attached is the Staff Report for Humboldt Water Systems, Inc.'s applications for a permanent rate increase and authorization for financing. Staff recommends approval of the rate increase in accordance with Staff's recommendations. Staff also recommends approval of the requested financing authorization.

Any party may file comments to the Staff Report with the Commission's Docket Control by 4:00 p.m. on or before September 30, 2013.

SMO:BCA:sms

Originator: Brendan C. Aladi

Arizona Corporation Commission  
DOCKETED

SEP 18 2013

DOCKETED BY	1112
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Service List for: Humboldt Water Systems, Inc.  
Docket Nos. W-02197A-13-0115 and W-02197A-12-0410)

Mr. Timothy Kylo  
Humboldt Water Systems, Inc.  
Post Office Box 10593  
Sedona, Arizona 86339

**STAFF REPORT  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION**

**HUMBOLDT WATER SYSTEMS, INC.  
DOCKET NOS. W-02197A-13-0115 and W-02197A-12-0410**

**APPLICATION  
FOR A  
PERMANENT RATE INCREASE**

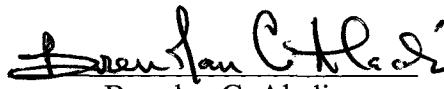
**AND**

**APPROVAL OF FINANCING APPLICATION**

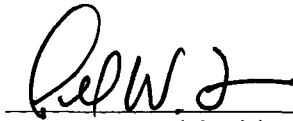
**September 18, 2013**

## STAFF ACKNOWLEDGMENT

The Staff Report for Humboldt Water Systems, Inc. (Docket Nos. W-02197A-13-0115 and W-02197A-12-0410) is the responsibility of the Staff members listed below. Brendan C. Aladi was responsible for the review and analysis of the applications, recommended revenue requirement, rate base, rate design and financial analysis. Delbert Smith is responsible for the engineering and technical analysis. Carmen Madrid is responsible for the analysis of customer complaints, opinions and other consumer data relative to these applications.



Brendan C. Aladi  
Public Utilities Analyst III



Del Smith  
Utilities Engineering Supervisor



Carmen Madrid  
Public Utilities Consumer Analyst I

**EXECUTIVE SUMMARY**  
**HUMBOLDT WATER SYSTEMS, INC.**  
**Docket Nos. W-02197A-13-0115 and W-02197A-12-0410**

On September 20, 2012, Humboldt Water Systems, Inc. ("Humboldt" or "Company") filed an application for approval of financing for a Water Infrastructure Finance Authority of Arizona ("WIFA") loan to fund its nitrate and arsenic treatment facilities. On April 26, 2013, Humboldt filed an application for a permanent rate increase with the Arizona Corporation Commission ("Commission"). On May 6, 2013, the Company filed a revised financing application.

Humboldt is a Class D for-profit S-Corporation, Arizona public service corporation that provides potable water service to approximately 315 metered customers. Humboldt serves the town of Dewey-Humboldt which is located on State Route 69 approximately 15 miles east of Prescott, in Yavapai County, Arizona.

The Company proposed total annual operating revenue of \$174,637, an increase of \$45,695 or 35.44 percent over the test year revenue of \$128,942, as shown on Schedule BCA-1. However, the Company's proposed rates actually produce total revenues of \$206,621. The Company's proposed rates would increase the typical 5/8 x 3/4-inch meter residential bill, with a median usage of 3,654 gallons from \$28.18 to \$42.03, an increase of \$13.84, or 49.1 percent, as shown on Schedule BCA-5. The Company's original cost rate base ("OCRB") for the test year was \$216,781.

The Company requests approval of long-term debt financing in the amount of \$301,528, to fund Humboldt's nitrate and arsenic treatment facilities. Utilities Division Staff ("Staff") concludes that the cost estimates are reasonable.

Staff recommends total base revenue of \$155,490, an increase of \$24,764 or 18.94 percent over the Staff-adjusted test year revenue of \$130,726, as shown on Schedule BCA-1. In addition, Staff is recommending a WIFA loan surcharge that would generate an estimated revenue of \$22,891, for a total annual revenue of \$178,381 as shown on Schedule BCA-1. Base revenues are intended to support all operations except the debt service of the new loan. The debt service (i.e., principal and interest payments) will be covered by revenues generated from the WIFA loan surcharge. The sum of the two components represents a total increase of \$47,655 or 36.45 percent, over the Staff-adjusted test year revenue of \$130,726.

Staff's recommended base rates (excluding the WIFA loan surcharge) would increase the typical 5/8 x 3/4-inch meter residential bill with a median usage of 3,654 gallons from \$28.18 to \$30.10 for an increase of \$1.91, or 6.8 percent, as shown on Schedule BCA-5. The increase including the estimated WIFA surcharge would increase the median 5/8 x 3/4-inch meter residential customer bill from \$28.18 to \$34.74, for an increase of \$6.55 or 23.2 percent, as shown on Schedule BCA-5.1.

Staff's recommended rates and surcharge yield a net cash flow of \$56,482, as shown on line 37 of Schedule BCA-9. Staff recommended revenue results in an operating margin on base rate of 9.98 percent and when the WIFA loan surcharge is added, the operating margin is 20.42 percent and a rate of return of 17.86 percent as shown on Schedule BCA-9. Staff has recommended an OCRB of \$203,986.

## **STAFF'S RECOMMENDATIONS**

Staff recommends:

1. That the Commission approve the Staff-recommended rates and charges as shown on Schedule BCA-4.
2. That the Company file with Docket Control, as a compliance item in this Docket, a schedule of its approved rates and charges within 30 days after the Decision in this matter is issued.
3. That the Commission authorize the Company's request for approval of long-term debt financing in the amount of \$301,528, to fund Humboldt's nitrate and arsenic treatment facilities.
4. That the Commission approve a WIFA surcharge mechanism as discussed herein.
5. That the actual amount of the WIFA loan surcharge be calculated based upon the actual amount of the WIFA loan and actual number of customers at the time of loan closing.
6. That upon filing of the loan closing notice, the Company may file in this Docket an application requesting implementation of the associated surcharge.
7. That the Company file as a compliance item in this Docket, within 30 days of the execution of any financing transaction authorized herein, a notice confirming that such execution has occurred and a certification by an authorized Company representative that the terms of the financing fully comply with the authorizations granted.
8. That the Company provide to Staff, upon request, a copy of any loan documents executed pursuant to the authorizations granted herein.
9. That approval of the loan and surcharge be rescinded if the Company has not drawn funds from the WIFA loan within one year of the date of the Decision resulting from this proceeding.
10. That the Company file with Docket Control, as a compliance item in this docket within 18 months of the effective date of the order in this matter, the ADEQ Approval of Construction for the arsenic/nitrate treatment system.

11. That the Company continue to coordinate the reading of its well meters and individual customer meters on a monthly basis and report this data in its Annual Reports going forward.<sup>1</sup> Staff further recommends that, in the event the water loss reported in any future Annual Report is greater than 10 percent, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to less than 10 percent. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted per this recommendation, shall be docketed as a compliance item no later than April 30 of the year following the excessive water loss.
12. That the Company use the depreciation rates in Table B on a going forward basis (see Section H Depreciation Rates of the Engineering Staff Report).
13. That the Company file with Docket Control, as a compliance item in this docket and within 45 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMPs") in the form of tariffs that substantially conform to the templates created by Staff for Commission's review and consideration. The templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>. A maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

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<sup>1</sup> The Company shall collect the data needed to accurately complete the water use data sheets contained in the Annual Report form.

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Engineering Report for Rate Increase and Financings .....	Attachment A
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## FACT SHEET

Company: Humboldt Water Systems, Inc.

Current Rates: Decision No. 61529, dated February 19, 1999.

Type of Ownership: An Arizona Subchapter "S" Corporation.

Location: Humboldt Water Systems ("Humboldt") serves the town of Dewey-Humboldt which is located on State Route 69 approximately 15 miles east of Prescott, in Yavapai County, Arizona. Humboldt's service area is located within the Arizona Department of Water Resources ("ADWR") Prescott Active Management Area.

Rates: Permanent rate increase application filed: April 26, 2013.

Financing application filed: September 20, 2012 (revised on May 6, 2013).

Monthly Charges:

	Company Current <u>Rates</u>	Company Proposed <u>Rates</u>	Staff Recommended Rates Including <u>Surcharge</u>
Monthly Minimum Charge:			
5/8 x 3/4-inch meter	\$21.55	\$29.50	\$27.14
3/4-inch meter	21.55	29.50	29.45
1-inch meter	27.35	35.35	67.84
1 1/2-inch meter	37.35	46.35	135.68
2-inch meter	43.35	52.35	217.09
3-inch meter	61.60	69.60	434.17
4-inch meter	121.60	129.60	678.39
6-inch meter	601.60	609.60	1,356.79

Gallons in Minimum	1	0	0
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Commodity Charge:

### All Meters Sizes

0 to 1,000 gallons (per 1,000 gallons)	\$0.00	N/A	N/A
Over 1,001 gallons (per 1,000 gallons)	2.50	N/A	N/A

	Company Current <u>Rates</u>	Company Proposed <u>Rates</u>	Staff Recommended <u>Rates</u>
Commodity Charge:			
<u>All Meter Sizes</u>			
0 to 3,000 gallons (per 1,000 gallons)	N/A	\$3.25	N/A
3,001 to 10,000 gallons (per 1,000 gallons)	N/A	\$4.25	N/A
Over 10,000 gallons (per 1,000 gallons)	N/A	\$6.25	N/A
<u>All Meter Sizes</u>			
0 to 3,000 gallons (per 1,000 gallons)	N/A	N/A	\$1.90
3,001 to 10,000 gallons (per 1,000 gallons)	N/A	N/A	\$2.90
Over 10,000 gallons (per 1,000 gallons)	N/A	N/A	\$4.00

Customers: The Company served an average of 315 metered customers during the test year, broken out by meter size as follows:

5/8 x 3/4 – inch meter	185
3/4 – inch meter	123
1 – inch meter	2
1-1/2 – inch meter	1
2 – inch meter	<u>4</u>
	315

Number of metered customers in prior test year (12/31/07): 209

Number of metered customers in the current test year (12/31/10): 315

Customer notification for the rate application filed: On April 23, 2013, a notarized affidavit of mailing “Customer Notification” was filed for the rate application.

## SUMMARY OF FILING

The test year results as adjusted by Utilities Division Staff ("Staff") for Humboldt Water Systems, Inc. ("Humboldt" or "Company") show total operating revenue of \$130,726, an operating loss of \$7,131, for no rate of return, as shown on Schedule BCA-1. The original cost rate base ("OCRB") as adjusted by Staff is \$203,986.

The Company proposed total operating revenue of \$174,637, an increase of \$45,695 or 35.44 percent over the test year revenue of \$128,942, as shown on Schedule BCA-1. However, the Company's proposed rates actually produce total revenues of \$206,621. The Company's proposed rates would increase the typical 5/8 x 3/4-inch meter residential bill, with a median usage of 3,654 gallons from \$28.18 to \$42.03, an increase of \$13.84, or 49.1 percent, as shown on Schedule BCA-5. The Company claimed an OCRB for the test year of \$216,781.

The Company requests the approval of long-term debt financing in the amount of \$301,528, to fund Humboldt's nitrate and arsenic treatment facilities. Staff concludes that the cost estimates are reasonable.

Staff recommends total base revenue of \$155,490, an increase of \$24,764 or 18.94 percent over the Staff-adjusted test year revenue of \$130,726, as shown on Schedule BCA-1. In addition, Staff is recommending a WIFA loan surcharge that would generate an estimated revenue of \$22,891, for a total annual revenue of \$178,381 as shown on Schedule BCA-1. Base revenues are intended to support all operations except the debt service of the loan. The debt service (i.e., principal and interest payments) will be covered by revenues generated from the WIFA loan surcharge. The sum of the two components represents a total increase of \$47,655 or 36.45 percent, over the Staff-adjusted test year revenue of \$130,726.

Staff's recommended rates (excluding the WIFA loan surcharges) would increase the typical 5/8 x 3/4-inch meter residential bill with a median usage of 3,654 gallons from \$28.18 to \$30.10 for an increase of \$1.91, or 6.8 percent, as shown on Schedule BCA-5. Including the estimated WIFA surcharge would increase the median 5/8 x 3/4-inch meter residential customer bill from \$28.18 to \$34.74, for an increase of \$6.55 or 23.2 percent, as shown on Schedule BCA-5.1.

Staff's recommended rates and surcharge yield a net cash flow of \$54,482, as shown on line 37 of Schedule BCA-9. Staff recommended revenue results in an operating margin on base rate revenue of 9.98 percent and a rate of return of 17.86 percent. When the WIFA loan surcharge revenue is added, the operating margin is 20.42 percent and rate of return is 17.86 percent on an OCRB of \$203,986 as shown on Schedule BCA-9.

## **BACKGROUND**

During the test year ended October 31, 2012, Humboldt provided water service to an average of 315 metered customers. The current rates and charges were authorized by the Arizona Corporation Commission ("Commission") on February 19, 1999, in Decision No. 61529. Humboldt met sufficiency requirements on June 24, 2013.

Humboldt is a Class D Arizona public service corporation that is organized as a for profit S-Corporation. The Company provides potable water service to approximately 315 metered customers. Humboldt serves the town of Dewey-Humboldt which is located on State Route 69 approximately 15 miles east of Prescott, in Yavapai County, Arizona.

On September 20, 2012, Humboldt filed an application for approval of financing for a Water Infrastructure Finance Authority of Arizona ("WIFA") loan to fund its nitrate and arsenic treatment facilities. On April 26, 2013, Humboldt filed an application for a permanent rate increase with the Commission. On May 6, 2013, the Company filed a revised financing application. On June 24, 2012, Staff issued a Letter of Sufficiency.

A Procedural Order issued July 12, 2013, consolidated the two dockets.

## **CONSUMER SERVICES**

A search of the Consumer Service database revealed the following regarding Humboldt's customer service performance:

2010 – One complaint- Quality of service.

2011 – Zero complaints.

2012 – One Complaint – Billing.

2013- Six complaints – one billing, one service, three quality of service, one rate case item. Two opinions – Opposing the rate increase request. .

All complaints have been resolved and closed.

Customer notification for the rate application filed: On April 23, 2013, a notarized affidavit of mailing "Customer Notification" was filed for the rate application.

## **COMPLIANCE**

The Utilities Division Compliance Section shows no outstanding compliance issues.

Humboldt is in good standing with the Corporations Division of the Commission.

## ENGINEERING ANALYSIS AND RECOMMENDATIONS

Staff Engineering Section Supervisor, Del Smith, inspected Humboldt's plant facilities on August 9, 2013, accompanied by Company President, Timothy Kylo. A complete discussion of Staff's technical findings and recommendations and a complete description of the water system are provided in the attached Engineering Report (Attachment A).

### RATE BASE

The Company did not propose a fair value rate base that differs from its OCRB. Staff's adjustments decreased the Company's proposed rate base by \$12,795, from \$216,781 to \$203,986, as shown on Schedule BCA-2, page 1. Details of Staff's adjustment are discussed below.

#### *Plant-in-Service*

Adjustment A increases Plant-in-Service by \$1,114, from \$524,966 to \$526,080, as shown on Schedule BCA-2, pages 1 and 2. Adjustment A is comprised of the following:

Land and Land Rights – Adjustment "a" increases this account by \$600 from \$6,050 to \$6,650, as shown on Schedule BCA-2, pages 2 and 3. Staff increased this account by \$600 to reflect Staff's updated and supported plant.

Wells and Springs – Adjustment "b" increases this account by \$20,181 from \$14,158 to \$34,339, as shown on Schedule BCA-2, pages 2 and 3. Staff increased this account by \$20,181 to reflect post-test year plant deemed to be used and useful.

Power Generation Equipment – Adjustment "c" increases this account by \$79,092 from \$0 to \$79,092, as shown on Schedule BCA-2, pages 2 and 3. Staff increased this account by \$79,092 to reflect the transfer of \$79,092 from other plant and miscellaneous equipment to power generation equipment.

Meter and Meter Installation – Adjustment "d" decreases this account by \$19,667 from \$36,235 to \$16,568, as shown on Schedule BCA-2, pages 2 and 3. Staff decreased this account by \$19,667 to reflect the Company's inappropriate accounting of retirements. The Company did not keep records of plant retirements and estimated plant retirements to be equal to plant additions.

Other Plant and Miscellaneous Equipment – Adjustment "e" decreases this account by \$79,092 from \$79,092 to \$0, as shown on Schedule BCA-2, pages 2 and 3. Staff decreased this account by \$79,092 to reflect the transfer of \$79,092 from other plant and miscellaneous equipment to power generation equipment.

### *Accumulated Depreciation*

Adjustment B increases this account by \$27,569 from \$265,732 to \$293,301, as shown on Schedule BCA-2, pages 1 and 4.

Staff calculated the ending balance of accumulated depreciation by utilizing the ending plant balances and accumulated depreciation by plant account in the last rate case, Decision No. 61529, reflecting plant additions and retirements as identified by Staff and applying the Commission-approved composite depreciation rate. The Company used unapproved depreciation rates in calculating the accumulated depreciation balance.

### *Amortization of Contributions in aid of construction (CIAC)*

Adjustment C increases this account by \$1,483 from \$0 to \$1,483, as shown on Schedule BCA-2, pages 1 and 4. Staff increased this account by \$1,483 to reflect the amortization of CIAC during the test year.

### *Working Capital*

Humboldt did not claim any working capital allowance. Staff's adjustments D and E result in a net increase to working capital of \$12,177 from \$0 to \$12,177, as shown on Schedule BCA-2, pages 1 and 5.

Cash working capital was calculated by using the formula method which equals one-eighth of the operating expenses less depreciation, taxes, purchased power and purchased water expenses plus one twenty-fourth of purchased power and purchased water expenses.

## **OPERATING INCOME STATEMENT**

### **Operating Revenue**

Staff adjustments to total operating revenue resulted in a net increase of \$1,784 from \$128,942 to \$130,726, as shown on Schedule BCA-3, pages 1 and 2. Details of Staff's adjustments are discussed below.

Metered Water Revenue – Adjustment A increases metered water revenue by \$1,784 from \$127,797 to \$129,581, as shown on Schedule BCA-3, pages 1 and 2. Staff's adjustment reflects Staff's calculation of the metered water revenue using the billing determinants provided by the Company.

### **Operating Expenses**

Staff's adjustments to operating expenses resulted in a decrease of \$12,126, from \$149,983 to \$137,857, as shown on Schedule BCA-3, page 1. The adjustments are explained below.

Outside Services Expense – Adjustment B decreases this account by \$12,635 from \$70,335 to \$57,700, as shown on Schedule BCA-3, pages 1 and 2. Staff calculated and recognized \$15 per customer, per month in management fee for all services allowed for a utility this size.

Water Testing – Adjustment C decreases water testing expense by \$762 from \$4,437 to \$3,675, as shown on Schedule BCA-3, pages 1 and 2. See Engineering Report.

Rate Case Expense – Adjustment D increases this account by \$2,106 from \$0 to \$2,106, as shown on Schedule BCA-3, pages 1 and 2. Staff's rate case expense reflects a reasonable amount of rate case expense based on normalization over a five-year span.

Miscellaneous Expense – Adjustment E increases this account by \$315 from \$0 to \$315, as shown on Schedule BCA-3, pages 1 and 2. Staff's miscellaneous water testing expense reflects miscellaneous certified operator water testing related expenses.

Depreciation Expense – Adjustment F decreases this account by \$2,892 from \$25,823 to \$22,931, as shown on Schedule BCA-3, pages 1 and 2. Staff's depreciation expense reflects application of Staff's recommended depreciation rates to Staff's recommended plant balances.

Property Taxes – Adjustment G increases property tax by \$1,742 from \$5,846 to \$7,588, to reflect Staff's calculation of property tax expense, as shown on Schedule BCA-10.

### **REVENUE REQUIREMENT**

Staff recommends total base revenue of \$155,490, an increase of \$24,764, or 18.94 percent, over Staff-adjusted test year revenue of \$130,726. Staff's recommended rates and surcharges yield a cash flow of \$56,482, as shown on Schedule BCA-9, columns A and C.

Staff's total revenue requirement of \$178,381 including the estimated WIFA surcharge, provides the Company with sufficient cash flow to pay operating expenses, contingencies, principal and interest on the requested loans, and to meet the minimum 1.2 debt service coverage ("DSC") ratio required by WIFA on the loan. Cash flow needs and DSC requirements determined the revenue requirement.

## **RATE DESIGN**

Schedule BCA-4 presents a complete list of the Company's present, proposed, and Staff's recommended rates and charges.

The Company proposed total operating revenue of \$174,637, an increase of \$45,695 or 35.44 percent over the test year revenue of \$128,942, as shown on Schedule BCA-1. However, the Company's proposed rates actually produce total revenues of \$206,621. The Company's proposed rates would increase the typical 5/8 x 3/4-inch meter residential bill, with a median usage of 3,654 gallons from \$28.18 to \$42.03, an increase of \$13.84, or 49.1 percent, as shown on Schedule BCA-5.

Staff's recommended base rates (excluding the WIFA loan surcharges) would increase the typical 5/8 x 3/4-inch meter residential bill with a median usage of 3,654 gallons from \$28.18 to \$30.10, for an increase of \$1.91, or 6.8 percent. Once the WIFA loan surcharge is implemented, the typical 5/8 x 3/4-inch meter residential bill of \$30.10 would increase by the amount of the surcharge, approximately \$4.64, to \$34.74. The combined base rates and surcharge components would increase the typical 5/8 x 3/4-inch meter residential bill by \$6.55, or 23.2 percent, from \$28.18 to \$34.74, as shown on Schedule BCA-5.1.

## **MISCELLANEOUS SERVICE CHARGES**

### **Miscellaneous Service Charges**

The Company proposes to change the establishment charge from \$15 to \$45. Staff finds \$35 as a reasonable charge for the service and recommends approval of Staff's amount.

The Company proposes to change the reconnection (delinquent) charge from \$25 to \$45. Staff finds \$35 as a reasonable charge for the service and recommends approval of Staff's amount.

The Company proposes to change the meter test (if correct) charge from \$25 to \$65. Staff finds \$30 as a reasonable charge for the service and recommends approval of Staff's amount.

The Company proposes to change the meter reread (if correct) charge from \$10 to \$45. Staff finds \$20 as a reasonable charge for the service and recommends approval of Staff's amount.

Staff recommends elimination of the \$25.00 Establishment (After Hours) tariff and does not recommend approval of the proposed \$65.00 After Hours Service Charge tariff. Staff agrees with the Company that an after-hour service charge is appropriate when it is at the customer's request. Such a charge compensates the utility for additional expenses incurred when providing after-hour service.



Staff recommends the addition of a Service Charge (after hours) tariff in the amount of \$40.00 and that this charge be in addition to the charge for any utility service provided after hours at the customer's request.

## **FINANCING APPLICATION AND SURCHARGE MECHANISM**

### **Purpose and Terms of the Proposed Financing and Surcharge Mechanism**

On September 20, 2012, Humboldt filed with the Commission a financing application requesting authority to incur long term debt in the amount of \$160,000 to fund the engineering, procurement, installation, and operation of a treatment plant to reduce nitrates and arsenic.

On May 6, 2013, the Company amended its financing application requesting authority to incur long term debt in the amount of \$300,000 (an increase of \$140,000). The additional funding was needed to fund the construction of a new building to house the treatment plant. Also the scope of the project was expanded to include a new booster station and isolation valve installations in the distribution system.

Staff examined the construction plans and estimated costs for Humboldt's projects and found the cost estimates to be reasonable and appropriate. A complete discussion of Staff's technical findings and recommendations concerning the financing applications can be found in the attached Engineering Report.

The proposed \$301,528 WIFA loan is a 20-year amortizing loan at a 4.5 percent interest rate. Based upon Staff's review of the application and the Company's unaudited 2012 financial statements, the Company lacks sufficient earnings and operating cash flow to meet its proposed long-term debt obligation. Therefore, a surcharge that provides funds for the debt service on the WIFA loan is appropriate. Because the final details of the WIFA loan will not be known until after the Company has closed on the loan, Staff is recommending a surcharge mechanism.

Schedule BCA-7 presents a calculation of the additional annual revenue needed by the Company to service a \$301,528 loan over 20 years at 4.5 percent interest rate for the proposed arsenic/nitrate treatment system. Based on Staff's calculations, \$301,528 of WIFA debt will require the Company to generate an annual cash flow of \$22,891 through the surcharge. Staff's calculation shows that a residential customer on a 5/8 x 3/4-inch meter will be required to pay a monthly surcharge of \$4.64.

The surcharge mechanism establishes the methodology for calculating the surcharge amount to be applied to the rates established in this rate application.

## **STAFF'S RECOMMENDATIONS**

Staff recommends:

1. That the Commission approve the Staff-recommended rates and charges as shown on Schedule BCA-4.
2. That the Company file with Docket Control, as a compliance item in this Docket, a schedule of its approved rates and charges within 30 days after the Decision in this matter is issued.
3. That the Commission authorize the Company's request for approval of long-term debt financing in the amount of \$301,528, to fund Humboldt's nitrate and arsenic treatment facilities.
4. That the Commission approve a WIFA loan surcharge mechanism as discussed herein.
5. That the actual amount of the WIFA loan surcharge be calculated based upon the actual amount of the WIFA loan and actual number of customers at the time of loan closing.
6. That upon filing of the loan closing notice, the Company may file in this Docket an application requesting implementation of the associated surcharge.
7. That the Company file as a compliance item in this Docket, within 30 days of the execution of any financing transaction authorized herein, a notice confirming that such execution has occurred and a certification by an authorized Company representative that the terms of the financing fully comply with the authorizations granted.
8. That the Company provide to Staff, upon request, a copy of any loan documents executed pursuant to the authorizations granted herein.
9. That approval of the loan and surcharge be rescinded if the Company has not drawn funds from the WIFA loan within one year of the date of the Decision resulting from this proceeding.
10. That the Company file with Docket Control, as a compliance item in this docket within 18 months of the effective date of the order in this matter, the ADEQ Approval of Construction for the arsenic/nitrate treatment system.
11. That the Company continue to coordinate the reading of its well meters and individual customer meters on a monthly basis and report this data in its Annual Reports going

forward.<sup>3</sup> Staff further recommends that, in the event the water loss reported in any future Annual Report is greater than 10 percent, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to less than 10 percent. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted per this recommendation, shall be docketed as a compliance item no later than April 30 of the year following the excessive water loss.

12. That the Company use the depreciation rates in Table B on a going forward basis (see Section H Depreciation Rates of the Engineering Staff Report).
13. That the Company file with Docket Control, as a compliance item in this docket and within 45 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMPs") in the form of tariffs that substantially conform to the templates created by Staff for Commission's review and consideration. The templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>. A maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

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<sup>3</sup> The Company shall collect the data needed to accurately complete the water use data sheets contained in the Annual Report form.

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197A-12-0410

Schedule BCA-1

Test Year Ended October 31, 2012

**SUMMARY OF FILING**

	-- Present Rates --		-- Proposed Rates --		
	Company as Filed	Staff as Adjusted	Company as Filed	Staff as Adjusted	Staff as Adjusted Includes Surcharge Rev.
Revenues:					
Metered Water Revenue	\$127,797	\$129,581	\$173,492	\$154,345	\$154,345
Unmetered Water Revenue	0	0	0	0	0
Other Water Revenues	1,145	1,145	1,145	1,145	1,145
WIFA Loan Surcharge Revenue	0	0	0	0	22,891
<b>Total Operating Revenue</b>	<b>\$128,942</b>	<b>\$130,726</b>	<b>\$174,637</b>	<b>\$155,490</b>	<b>\$178,381</b>
Operating Expenses:					
Operation and Maintenance	\$118,314	\$107,338	\$118,314	\$107,338	\$107,338
Depreciation	25,823	22,931	25,823	22,931	22,931
Property & Other Taxes	5,846	7,588	5,846	7,631	8,050
Income Tax	0	0	0	2,065	3,631
<b>Total Operating Expense</b>	<b>\$149,983</b>	<b>\$137,857</b>	<b>\$149,983</b>	<b>\$139,965</b>	<b>\$141,950</b>
<b>Operating Income/(Loss)</b>	<b>(\$21,041)</b>	<b>(\$7,131)</b>	<b>\$24,654</b>	<b>\$15,525</b>	<b>\$36,431</b>
Interest on Both WIFA Loans	0	0	0	1,185	14,559
Rate Base O.C.L.D.	\$216,781	\$203,986	\$216,781	\$203,986	\$203,986
Rate of Return - O.C.L.D.	N/M	N/M	11.37%	7.61%	17.86%
Operating Margin	N/M	N/M	14.12%	9.98%	20.42%
Debt Service Coverage Ratio (Pre-Tax)	1.43	N/M	-	1.47	2.26

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197A-12-0410

Test Year Ended October 31, 2012

Schedule BCA-2

Page 1 of 5

**RATE BASE**

	----- Original Cost -----		
	Company	Adjustment	Staff
Plant in Service	\$524,966	\$1,114 A	\$526,080
Less:			
Accum. Depreciation	265,732	27,569 B	293,301
<b>Net Plant</b>	<b>\$259,234</b>	<b>(\$26,455)</b>	<b>\$232,779</b>
Less:			
Plant Advances	5,989	0	5,989
Service Line and Meter Advances	24,600	0	24,600
<b>Total Advances</b>	<b>30,589</b>	<b>0</b>	<b>30,589</b>
Contributions Gross	11,864	-	11,864
Less:			
Accumulated Amortization of CIAC	0	1,483 C	1,483
<b>Net CIAC</b>	<b>11,864</b>	<b>(1,483)</b>	<b>10,381</b>
<b>Total Deductions</b>	<b>42,453</b>	<b>(1,483)</b>	<b>40,970</b>
Plus:			
1/24 Power	0	\$620 D	\$620
1/8 Operation & Maint.	0	11,557 E	11,557
Inventory	0	0	0
Prepayments	0	0	0
<b>Total Additions</b>	<b>\$0</b>	<b>\$12,177</b>	<b>\$12,177</b>
<b>Rate Base</b>	<b>\$216,781</b>	<b>(\$12,795)</b>	<b>\$203,986</b>

*Explanation of Adjustment:*

- A - Refer to Schedule BCA-2, Page 3
- B - Refer to Schedule BCA-2, Page 3
- C - Refer to Schedule BCA-2, Page 4
- D - Refer to Schedule BCA-2, Page 4
- E - Refer to Schedule BCA-2, Page 4

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197A-12-0410

Test Year Ended October 31, 2012

Schedule BCA-2

Page 2 of 5

**PLANT ADJUSTMENTS**

	Company Exhibit	Adjustment		Staff Adjusted
301 Organization	\$2,378	\$ -		\$2,378
302 Franchises	0	-		0
303 Land & Land Rights	6,050	600	a	6,650
304 Structures & Improvements	10,041	-		10,041
307 Wells & Springs	14,158	20,181	b	34,339
310 Power Generation Equipment	0	79,092	c	79,092
311 Electrical Pumping Equipment	54,440	-		54,440
320 Water Treatment Equipment (Soln. Chemical Fdr.)	2,087	-		2,087
330 Distribution Reservoirs & Standpipes	0	-		0
330.1 Storage Tank	26,500	-		26,500
330.2 Pressure Tank	0	-		0
331 Transmission & Distribution Mains	170,246	-		170,246
333 Services	123,739	-		123,739
334 Meters & Meter Installations	36,235	(19,667)	d	16,568
335 Hydrants	0	-		0
336 Backflow Prevention Devices	0	-		0
339 Other Plant and Misc. Equipment	79,092	(79,092)	e	0
340 Office Furniture & Equipment	0	-		0
341 Transportation Equipment	0	-		0
343 Tools Shop & Garage Equipment	0	-		0
344 Laboratory Equipment	0	-		0
345 Power Operated Equipment	0	-		0
346 Communication Equipment	0	-		0
347 Miscellaneous Equipment	0	-		0
348 Other Tangible Plant	0	-		0
105 C.W.I.P.	0	-		0
<b>TOTALS</b>	<b>\$524,966</b>	<b>\$ 1,114</b>	<b>A</b>	<b>\$526,080</b>

# STAFF PLANT ADJUSTMENTS

a	LAND & LAND RIGHTS - Per Company Per Staff	\$6,050	
		<u>\$6,650</u>	<u>\$ 600</u>
	To reflect Staff's updated and supported land and land rights.		
b	WELLS AND SPRINGS - Per Company Per Staff	14,158	
		<u>34,339</u>	<u>\$ 20,181</u>
	To reflect the addition of \$20,181 in post test year plant, identified and deemed used and useful.		
c	POWER GENERATION EQUIPMENT - Per Company Per Staff	\$0	
		<u>\$79,092</u>	<u>\$ 79,092</u>
	To reflect Staff's transfer of \$79,092 from other plant and miscellaneous equipment to power generation equipment.		
d	METER AND METER INSTALLATION - Per Company Per Staff	\$36,235	
		<u>\$16,568</u>	<u>\$ (19,667)</u>
	To correct Company's inappropriate accounting of retirements.		
e	OTHER PLANT AND MISCELLANEOUS - Per Company Per Staff	\$79,092	
		<u>0</u>	<u>\$ (79,092)</u>
	To reflect Staff's transfer of \$79,092, from other plant and miscellaneous equipment to power generation equipment.		

**Humboldt Water Systems, Inc.**

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Test Year Ended October 31, 2012

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**ACCUMULATED DEPRECIATION ADJUSTMENT**

	<u>Amount</u>
Accumulated Depreciation - Per Company	\$ 265,732
Accumulated Depreciation - Per Staff	<u>293,301</u>
<b>Total Adjustment</b>	<b>B - <u>\$27,569</u></b>

To reflect Staff's calculation of accumulated depreciation expense based upon Staff's adjustments to plant.

ACCT		Company	Staff	Staff
No.	Description	Application	Adjustment	Calculated
301	Intangibles	\$ -	\$ -	\$ -
303	Land and Land Rights	\$ -	\$ -	\$ -
304	Structures and Improvements	\$ 4,346	\$ 464	\$ 4,810
307	Wells and Springs	\$ 7,072	\$ 7,086	\$ 14,158
310	Power Generation Equipment	\$ -	\$ 9,887	\$ 9,887
311	Electrical Pumping Equipment	\$ 54,012	\$ (4,095)	\$ 49,917
320	Water Treatment Equipment (Soln.Chm.Fdr)	\$ 1,565	\$ 522	\$ 2,087
330	Distribution Reservoirs & Standpipes	\$ -	\$ -	\$ -
330.1	Storage Tank	\$ 12,354	\$ 5,534	\$ 17,888
330.2	Pressure Tank	\$ -	\$ -	\$ -
331	Transmission and Distribution Mains	\$ 97,158	\$ 34,129	\$ 131,287
333	Services	\$ 52,046	\$ 10,248	\$ 62,294
334	Meters and Meter Installation	\$ 29,349	\$ (28,376)	\$ 973
335	Hydrants	\$ -	\$ -	\$ -
339	Other Plant and Miscellaneous Equipment	\$ 7,830	\$ (7,830)	\$ -
340	Office Furniture and Fixtures	\$ -	\$ -	\$ -
340.1	Computers and Software	\$ -	\$ -	\$ -
341	Transportation Equipment	\$ -	\$ -	\$ -
343	Tools and Work Equipment	\$ -	\$ -	\$ -
345	Power Operated Equipment	\$ -	\$ -	\$ -
346	Communications Equipment	\$ -	\$ -	\$ -
348	Other Tangible Plant	\$ -	\$ -	\$ -
Total		\$ 265,732	\$ 27,569	\$ 293,301



**STAFF PLANT ADJUSTMENTS**

C -	AMORTIZATION OF CIAC - Per Company Per Staff	\$0 \$1,483	\$	1,483
	To reflect amortization of contribution in aid of construction during the test year.			
D -	WORKING CAPITAL (1/24 Purchased Pwr & Wtr) Per Company Per Staff	\$0 \$620	\$	620
	To reflect Staff's calculation of cash working capital based on Staff's recommendations for purchased power and purchase water.			
E -	WORKING CAPITAL (1/8 operation & Maint exp.) Per Company Per Staff	\$0 11,557	\$	11,557
	To reflect Staff's calculation of cash working capital based on Staff's recommendations for operation and maintenance expense (excluding purchased power and purchased water expenses).			

**Humboldt Water Systems, Inc.**

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Test Year Ended October 31, 2012

Schedule BCA-3

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**STATEMENT OF OPERATING INCOME**

	Company Exhibit	Staff Adjustments	Staff Adjusted
Revenues:			
461 Metered Water Revenue	\$127,797	\$1,784 A	\$129,581
460 Unmetered Water Revenue	0	0	0
474 Other Water Revenues	1,145	0	1,145
Total Operating Revenue	\$128,942	\$1,784	\$130,726
Operating Expenses:			
601 Salaries and Wages	\$0	\$0	\$0
610 Purchased Water	0	0	0
615 Purchased Power	14,883	0	14,883
618 Chemicals	2,750	0	2,750
620 Repairs and Maintenance	23,009	0	23,009
621 Office Supplies & Expense	0	0	0
630 Outside Services	70,335	(12,635) B	57,700
635 Water Testing	4,437	(762) C	3,675
641 Rents	0	0	0
650 Transportation Expenses	0	0	0
657 Insurance - General Liability	2,900	0	2,900
665 Regulatory Commission Expense	0	0	0
666 Regulatory Commission Expense - Rate Case	0	2,106 D	2,106
675 Miscellaneous Expense	0	315 E	315
403 Depreciation Expense	25,823	(2,892) F	22,931
408 Taxes Other Than Income	0	0	0
408.11 Property Taxes	5,846	1,742 G	7,588
409 Income Tax	0	0	0
Total Operating Expenses	\$149,983	(\$12,126)	\$137,857
<b>OPERATING INCOME/(LOSS)</b>	<b>(\$21,041)</b>	<b>\$13,910</b>	<b>(\$7,131)</b>

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197A-12-0410

Test Year Ended October 31, 2012

Schedule BCA-3

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**STAFF ADJUSTMENTS**

A -	METERED WATER REVENUE - Per Company	\$127,797	
	Per Staff	129,581	\$1,784

To add \$1,784 in metered water revenue per Company's submitted bill count.

B -	OUTSIDE SERVICES - Per Company	\$70,335	
	Per Staff	57,700	(\$12,635)

To reflect a typical management fee rate of \$15 per customer recommended by Staff for Company this size.

C -	WATER TESTING - Per Company	\$4,437	
	Per Staff	3,675	(\$762)

To reflect annual water testing expense, per Staff's Engineering report.

D -	RATE CASE EXPENSE - Per Company	\$0	
	Per Staff	2,106	\$2,106

To reflect a reasonable normalized amount of rate case expense based on three years between rate cases.

\$	10,530	Rate Case Expense
	5	Divided by 5 years
\$	2,106	Annual Rate Case Expense

E -	MISCELLANEOUS EXPENSE - Per Company	\$0	
	Per Staff	315	\$315

To add \$315 in miscellaneous water testing expense.

**STAFF ADJUSTMENTS (Cont.)**

F - DEPRECIATION - Per Company \$25,823  
Per Staff 22,931 (\$2,892)

To reflect application of Staff's recommended depreciation rates to  
Staff's recommended plant, by account.

**Pro Forma Annual Depreciation Expense:**

**Operating Income Adjustment I - Test Year Depreciation Expense**

LINE NO.	DESCRIPTION	[A] Plant In Service Per Staff	[B] NonDepreciable or Fully Depreciated Plant	[C] Depreciable Plant Col A - Col B	[D] Depreciation Rate	[E] Depreciation Expense (Col C x Col D)
1	301 - Organization Cost	\$ 2,378	\$ 2,378	-	0.00%	\$ -
2	302 - Franchise Cost	\$ -	\$ -	-	0.00%	-
3	303 - Land and Land Rights	\$ 6,650	\$ 6,650	-	0.00%	-
4	304 - Structures and Improvements	\$10,041	-	10,041	3.33%	334
5	305 - Collecting and Impounding Res.	-	-	-	2.50%	-
6	306 - Lake River and Other Intakes	-	-	-	2.50%	-
7	307 - Wells & Springs	\$34,339	-	34,339	3.33%	1,143
8	308 - Infiltration Galleries and Tunnels	-	-	-	6.67%	-
9	309 - Supply Main	-	-	-	2.00%	-
10	310 - Power Generation Equip.	-	-	-	5.00%	-
11	310.1 - Solar System	79,092.00	-	79,092	6.67%	5,275
12	311 - Electric Pumping Equipment	\$54,440	-	54,440	12.50%	6,805
13	320 - Water Treatment Equipment	-	-	-	-	-
14	320.1 Water Treatment Plants	-	-	-	3.33%	-
15	320.2 Solution Chemical Feeders	2,087.00	-	2,087	20.00%	417
16	320.3 - Point-of-Use Treatment Device	-	-	-	10.00%	-
17	330 - Distribution Resrvr & Standpipe	-	-	-	-	-
18	330.1 Storage Tanks	\$26,500	-	26,500	2.22%	588
19	330.2 Pressure Tanks	-	-	-	5.00%	-
20	331 - Transmission & Distr. Mains	\$170,246	-	170,246	2.00%	3,405
21	333 - Services	\$123,739	-	123,739	3.33%	4,121
22	334 - Meter & Meter Installations	\$16,568	-	16,568	8.33%	1,380
23	335 - Hydrants	-	-	-	2.00%	-
24	336 - Backflow Prevention Devices	-	-	-	6.67%	-
25	339 - Other Plant & Misc Equipment	-	-	-	6.67%	-
26	340 - Office Furniture and Fixtures	-	-	-	6.67%	-
27	340.1 Computers and Softwares	-	-	-	20.00%	-
28	341 - Transportation Equipment	-	-	-	20.00%	-
29	342 - Stores Equipment	-	-	-	4.00%	-
30	343 - Tools & Work Equipment	-	-	-	5.00%	-
31	344 - Laboratory Equipment	-	-	-	10.00%	-
32	345 - Power Operated Equipment	-	-	-	5.00%	-
33	346 - Communication Equipment	-	-	-	10.00%	-
34	347 - Miscellaneous Equipment	-	-	-	10.00%	-
35	348 - Other Tangible Plant	-	-	-	-	-
36	Total Plant	\$ 526,081	\$9,028	\$517,052		\$23,470
37						
38	Composite Depreciation Rate (Depr Exp / Depreciable Plant):					4.54%
39	CIAC:					\$ 11,864
40	Amortization of CIAC (Line 33 x Line 34):					\$ 539
41						
42	<b>Pro Forma Annual Depreciation Expense</b>					
43						
44	Plant in Service					\$526,081
45	Less: Non/Fully Depreciable Plant					9,028
46	Depreciable Plant					\$517,053
47	Times: Staff Proposed Depreciation Rate					4.54%
48	Depreciation Expense Before Amortization of CIAC:					\$ 23,470
49	Less Amortization of CIAC:					\$ 539
50	<b>Test Year Depreciation Expense - Staff:</b>					<b>\$ 22,931</b>
51	Depreciation Expense - Company:					\$25,823
52	<b>Staff's Total Adjustment:</b>					<b>\$ (2,892)</b>

**Humboldt Water Company**

Docket Nos. W-02197A-13-0115 and W-02197W-12-0410

Test Year Ended: October 31, 2012

Schedule BCA-3

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**STAFF ADJUSTMENTS**

G -	PROPERTY TAXES - Per Company	\$5,846	
	Per Staff	<u>7,588</u>	<u>\$1,742</u>

To reflect property tax expense using the Arizona  
Department of Revenue property method.

**RATE DESIGN**

	Present	Company	Staff	Staff	Total
	Rates	Proposed	Recommended	Recommended	Staff
Monthly Usage Charge				Surcharge	Recommended
5/8" x 3/4" Meter	\$ 21.55	\$ 29.50	\$ 22.50	\$ 4.64	\$ 27.14
3/4" Meter	21.55	29.50	22.50	6.95	29.45
1" Meter	27.35	35.35	56.25	11.59	67.84
1 1/2" Meter	37.35	46.35	112.50	23.18	135.68
2" Meter	43.35	52.35	180.00	37.09	217.09
3" Meter	61.60	69.60	360.00	74.17	434.17
4" Meter	121.60	129.60	562.50	115.89	678.39
6" Meter	\$ 601.60	\$ 609.60	\$ 1,125.00	\$ 231.79	\$ 1,356.79

Gallons in Minimum 1 0 0

Commodity Rates (Per 1,000 gallons)

All Meter Sizes

First Tier - 0 - 1,000 gallons N/A N/A  
Second Tier - Over 1,000 gallons \$ 2.50 N/A N/A

All Meter Sizes

First Tier - 0 - 3,000 gallons N/A \$ 3.25 N/A  
Second Tier - 3,001 - 10,000 gallons N/A \$ 4.25 N/A  
Third Tier - Over 10,000 gallons N/A \$ 6.25 N/A

All Meter Sizes

First Tier - 0 - 3,000 gallons N/A N/A \$ 1.90  
Second Tier - 3,001 - 10,000 gallons N/A N/A \$ 2.90  
Third Tier - Over 10,000 gallons N/A N/A \$ 4.00

	Company	Company Proposed	Staff Recommended	
Service Line and Meter Installation Charges	Current Rates	Service Line & Meter Charges	Service Line Charges	Meter Charges
5/8" x 3/4" Meter	\$ 330	\$ 660	\$ 490	\$ 170
3/4" Meter	375	660	420	240
1" Meter	440	880	538	342
1 1/2" Meter	660	1,200	614	586
2" Meter Turbine	1,155	2,500	\$ 1,107	\$ 1,393
2" Meter Compound	-	-	-	-
3" Meter Turbine	1,625	3,500	-	-
3" Meter Compound	-	-	-	-
4" Meter Turbine	2,540	4,250	-	-
4" Meter Compound	-	-	-	-
6" Meter Turbine	\$ 4,875	\$ 6,500	-	-
6" Meter Compound	-	-	-	-

\* At Cost

Service Charges

Establishment \$ 15.00 \$ 45.00 \$ 35.00  
Establishment (After Hours) \$ 25.00 N/A N/A  
Reconnection (Delinquent) \$ 25.00 \$ 45.00 \$ 35.00  
Reconnection (Delinquent after hours) NT NT N/A  
Meter Test (If Correct) 25.00 \$ 65.00 \$ 30.00  
Deposit \* \* \*  
Deposit Interest Per Annum \* \* \*  
Re-Establishment (Within 12 Months) \*\* \*\* \*\*  
NSF Check \$ 15.00 \$ 25.00 \$ 25.00  
Deferred Payment - Per Month N/A 1.50% 1.50%  
Meter Re-Read (If Correct) \$ 10.00 \$ 45.00 \$ 20.00  
Late Payment Charge-Per Month N/A 1.50% 1.50%  
Service Charge (After Hours) N/A \$ 65.00 \$ 40.00

Monthly Service Charge for Fire Sprinkler

4" or Smaller \$0.00 \$0.00 \*\*\*  
6" 0.00 0.00 \*\*\*  
8" 0.00 0.00 \*\*\*  
10" 0.00 0.00 \*\*\*  
Larger than 10" 0.00 0.00 \*\*\*

\* Per Commission Rule (R14-2-403(D)).

\*\* Number of months off system times the monthly minimum (R14-2-403(D)).

\*\*\* 2.00% of monthly minimum for a comparable size meter connection but no less than \$10.00 per month. The service charge for fire sprinklers is only applicable for service lines separate and distinct from the primary water service line.

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197A-12-0410

Schedule BCA-5

Test Year Ended: October 31, 2012

**TYPICAL BILL ANALYSIS**

5/8 x 3/4 - Inch Meter

Without Reflection Of WIFA Loan Surcharge In Current Rates

Average Number of Customers: 190

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	5,855	\$33.69	\$51.38	\$17.70	52.5%
Median Usage	3,654	\$28.18	\$42.03	\$13.84	49.1%
<u>Staff Recommended</u>					
Average Usage	5,855	\$33.69	\$36.48	\$2.79	8.3%
Median Usage	3,654	\$28.18	\$30.10	\$1.91	6.8%

**Present & Proposed Rates (Without Taxes)**

5/8 x 3/4 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$21.55	\$29.50	36.9%	\$22.50	4.4%
1,000	21.55	32.75	52.0%	24.40	13.2%
2,000	24.05	36.00	49.7%	26.30	9.4%
3,000	26.55	39.25	47.8%	28.20	6.2%
4,000	29.05	43.50	49.7%	31.10	7.1%
5,000	31.55	47.75	51.3%	34.00	7.8%
6,000	34.05	52.00	52.7%	36.90	8.4%
7,000	36.55	56.25	53.9%	39.80	8.9%
8,000	39.05	60.50	54.9%	42.70	9.3%
9,000	41.55	64.75	55.8%	45.60	9.7%
10,000	44.05	69.00	56.6%	48.50	10.1%
15,000	56.55	100.25	77.3%	68.50	21.1%
20,000	69.05	131.50	90.4%	88.50	28.2%
25,000	81.55	162.75	99.6%	108.50	33.0%
50,000	144.05	319.00	121.5%	208.50	44.7%
75,000	206.55	475.25	130.1%	308.50	49.4%
100,000	269.05	631.50	134.7%	408.50	51.8%
125,000	331.55	787.75	137.6%	508.50	53.4%
150,000	394.05	944.00	139.6%	608.50	54.4%
175,000	456.55	1,100.25	141.0%	708.50	55.2%
200,000	519.05	1,256.50	142.1%	808.50	55.8%

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197A-12-0410

Test Year Ended: October 31, 2012

Schedule BCA-5.1

**TYPICAL BILL ANALYSIS**

5/8 x 3/4 - Inch Meter

With Reflection Of \$301,528 WIFA (Loan) Surcharge In Current Rates  
at \$4.64 Per Customer Per Month

Average Number of Customers: 190

<u>Company Proposed</u>	<u>Gallons</u>	<u>Present Rates</u>	<u>Proposed Rates</u>	<u>Dollar Increase</u>	<u>Percent Increase</u>
Average Usage	5,855	\$33.69	\$51.38	\$17.70	52.5%
Median Usage	3,654	\$28.18	\$42.03	\$13.84	49.1%
<u>Staff Recommended</u>					
Average Usage	5,855	\$33.69	\$41.12	\$7.43	22.1%
Median Usage	3,654	\$28.18	\$34.74	\$6.55	23.2%

With Reflection Of \$301,528 WIFA (Loan) Surcharge In Current Rates  
at \$4.64 Per Customer Per Month  
5/8 x 3/4 - Inch Meter

<u>Gallons Consumption</u>	<u>Present Rates</u>	<u>Company Proposed Rates</u>	<u>% Increase</u>	<u>Staff Proposed Rates</u>	<u>% Increase</u>
0	\$21.55	\$29.50	36.9%	\$27.14	25.9%
1,000	21.55	32.75	52.0%	29.04	34.8%
2,000	24.05	36.00	49.7%	30.94	28.6%
3,000	26.55	39.25	47.8%	32.84	23.7%
4,000	29.05	43.50	49.7%	35.74	23.0%
5,000	31.55	47.75	51.3%	38.64	22.5%
6,000	34.05	52.00	52.7%	41.54	22.0%
7,000	36.55	56.25	53.9%	44.44	21.6%
8,000	39.05	60.50	54.9%	47.34	21.2%
9,000	41.55	64.75	55.8%	50.24	20.9%
10,000	44.05	69.00	56.6%	53.14	20.6%
15,000	56.55	100.25	77.3%	73.14	29.3%
20,000	69.05	131.50	90.4%	93.14	34.9%
25,000	81.55	162.75	99.6%	113.14	38.7%
50,000	144.05	319.00	121.5%	213.14	48.0%
75,000	206.55	475.25	130.1%	313.14	51.6%
100,000	269.05	631.50	134.7%	413.14	53.6%
125,000	331.55	787.75	137.6%	513.14	54.8%
150,000	394.05	944.00	139.6%	613.14	55.6%
175,000	456.55	1,100.25	141.0%	713.14	56.2%
200,000	519.05	1,256.50	142.1%	813.14	56.7%



# WIFA LOAN FINANCIAL ANALYSIS

## Selected Financial Information

### INCOME STATEMENT

	<u>Test Year</u>	<u>Pro Forma</u> <u>Without Surcharge</u>	<u>Pro Forma</u> <u>With Surcharge</u>
1 Operating Income	<b>(\$21,041)</b>	<b>\$15,525</b>	<b>\$ 36,431</b>
2 Depreciation & Amortization Expense	\$ 25,823	22,931	\$ 22,931
3 Income Tax Expense	\$ -	-	\$ -
4			
5 Interest Expense	\$ 1,185	\$ 14,559	\$ 14,559
6 Repayment Principal	\$2,160	\$11,678	\$11,678
7			
8			
9			
10			
11 <b>DSC</b>			
12 [1+2+3] ÷ [5+6]	1.43	1.47	2.26
13			
14			

### CAPITAL STRUCTURE

15				
16				
17				
18 Short-term Debt	\$0	0.0%	\$ 9,517.32	3.0%
19				
20 Long-term Debt	\$19,567	100.0%	\$311,578	97.0%
21				
22 Common Equity	\$0	0.0%	\$0	0.0%
23				
24 Total Capital	\$19,567	100.0%	\$321,095	100.0%

Twenty-year amortizing loan

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197W-12-0410

Test Year Ended: October 31, 2012

Schedule BCA-7

**CALCULATION OF SURCHARGE AMOUNT FOR  
ARSENIC AND NITRATES TREATMENT PLANT**

Installation of Storage Tank Loan Amount				\$ 301,528
Total Yearly Interest and Principal Payments Based on a 20-year WIFA Loan and a 4.50% Interest Rate.				\$ 22,891
Annual Income Tax Component of the Surcharge Revenue				\$ -
Total Annual Surcharge Revenue Requirement for the Loan				\$ 22,891
Total Equivalent Annual Bills				4,938
5/8"x 3/4" Meter Surcharge Amount	\$ 22,891	÷	4,938	\$ 4.64
3/4" Meter Surcharge Amount	\$ 4.64	x	1.5	\$ 6.95
1" Meter Surcharge Amount	\$ 4.64	x	2.5	\$ 11.59
1 1/2" Meter Surcharge Amount	\$ 4.64	x	5.0	\$ 23.18
2" Meter Surcharge Amount	\$ 4.64	x	6.0	\$ 37.09
3" Meter Surcharge Amount	\$ 4.64	x	16.0	\$ 74.17
4" Meter Surcharge Amount	\$ 4.64	x	25.0	\$ 115.89
6" Meter Surcharge Amount	\$ 4.64	x	50.0	\$ 231.79

Meter Size	Number of Customers	Customer Multiplier	Equivalent Customers	Equivalent No. of Bills	Monthly Surcharge	Yearly Surcharge	Total Amount
5/8" x 3/4" Meter	185	1	185	2,220	\$ 4.64	\$ 55.63	\$ 10,291.39
3/4" Meter	123	1.5	185	2,214	6.95	83.44	10,263.57
1" Meter	2	2.5	5	60	11.59	139.07	278.15
1 1/2" Meter	1	5	5	60	23.18	278.15	278.15
2" Meter	4	8	32	384	37.09	445.03	1,780
3" Meter	-	16	-	-	74.17	-	-
4" Meter	-	25	-	-	115.89	-	-
6" Meter	-	50	-	-	231.79	-	-
TOTAL	315		412	4,938			\$ 22,891

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197W-12-0410

Test Year Ended: October 31, 2012

Schedule BCA-8

**LOAN DATA:**

Loan Amount Requested	301,528	1.25	
Down Payment:	\$0		
Amount Financed:	\$301,528		
Number of years:	20	Compounding Periods:	12
Interest rate (r):	4.50%	APR:	4.59%

**LOAN AMORTIZATION SCHEDULE**

Period	Loan payment (1)	Beginning- of-month principal (2)	Payments		End-of-month principal [(2) - (4)] (5)	Annual Interest (6)	Annual Principal (7)	Annual Debt Payment (8)
			Interest [ r * (2) ] (3)	Principal [(1) - (3)] (4)				
1	\$1,907.61	\$301,528.00	\$1,130.73	\$776.88	\$300,751.12			
2	1,907.61	300,751.12	1,127.82	779.80	299,971.32			
3	1,907.61	299,971.32	1,124.89	782.72	299,188.59			
4	1,907.61	299,188.59	1,121.96	785.66	298,402.94			
5	1,907.61	298,402.94	1,119.01	788.60	297,614.33			
6	1,907.61	297,614.33	1,116.05	791.56	296,822.77			
7	1,907.61	296,822.77	1,113.09	794.53	296,028.24			
8	1,907.61	296,028.24	1,110.11	797.51	295,230.73			
9	1,907.61	295,230.73	1,107.12	800.50	294,430.23			
10	1,907.61	294,430.23	1,104.11	803.50	293,626.73			
11	1,907.61	293,626.73	1,101.10	806.51	292,820.22			
12	1,907.61	292,820.22	1,098.08	809.54	292,010.68	13,374.06	9,517.32	22,891.38

**Financial Analysis**

**Selected Financial Data**

**Including Immediate Effect of the Proposed Debt & WIFA loan surcharge**

	A		B		C
	Staff Recommended			Staff Recommended	
	Rates Without Surcharge	Staff		Rates With Surcharge	
	Loan principal & Interest	Adjustment:	REF	Loan principal & Interest	
1	Income Statement				
2	Revenues:				
3	461 Metered Water Revenue	\$154,345	\$ -		\$154,345
4	460 Unmetered Water Revenue	-	-		-
5	474 Other Water Revenues	1,145	-		1,145
6	WIFA Loan Surcharge	-	22,891	A	22,891
7	Total Operating Revenue	\$155,490	\$22,891		\$178,381
8	Operating Expenses:				
9	601 Salaries and Wages	\$ -	\$ -		\$ -
10	610 Purchased Water	-	-		-
11	615 Purchased Power	14,883	-		14,883
12	618 Chemicals	2,750	-		2,750
13	620 Repairs and Maintenance	23,009	-		23,009
14	621 Office Supplies & Expense	-	-		0
15	630 Outside Services	57,700	-		57,700
16	635 Water Testing	3,675	-		3,675
17	641 Rents	-	-		-
18	650 Transportation Expenses	-	-		0
19	657 Insurance - General Liability	2,900	-		2,900
20	670 Bad Debt Expense	-	-		0
21	666 Regulatory Commission Expense - R	2,106	-		2,106
22	675 Miscellaneous Expense	315	-		315
23	403 Depreciation Expense	22,931	-		22,931
24	427. Interest on Customer Deposits	0	-		0
25	408.11 Property Taxes	7,631	419		8,050
26	409 Income Tax	2,065	1,565		3,631
27	Total Operating Expenses	\$139,965	\$ 1,984		\$ 141,950
28	OPERATING INCOME/(LOSS)	\$15,525	\$20,907		\$36,432
29	Interest Income	-	\$ -		-
30	Interest Expense on Long-term Debt	-	\$ 14,559	B	\$14,559
31	Total Other Interest Expense	-	\$ 14,559		\$ 14,559
32	Net Income	\$ 15,525			\$ 21,873
33	Rate Base	\$203,986			\$203,986
34	Rate of Return(Line28/Line33)	7.61%			17.86%
35	Operating Margin (Line 28/Line 7)	9.98%			20.42%
36	Principal Repayment	-	11,678	C	11,678
37	Cash Flow [L32 + L23 - L36]	\$ 38,456			\$ 56,482
39	DSC				
40	[L23 + L26 + L28] / [L30 + L36]	-			2.26
41	Short-term Debt	\$0	0%		\$ 9,517 3%
42	Long-term Debt	19,567	100%		311,578 97%
43	Common Equity	-	0%		- 0%
	Total Capital	\$ 19,567			\$ 321,095 100%

A- See Revised Sch. BCA-6 and 7

B- See Revised Sch. BCA-6

C- See Revised Sch. BCA-6

**Humboldt Water Systems, Inc.**

Docket Nos. W-02197A-13-0115 and W-02197W-12-0410

Test Year Ended: October 31, 2012

Schedule BCA-10

**OPERATING INCOME ADJUSTMENT - PROPERTY TAXES**

LINE NO.	Property Tax Calculation	[A]	[B]
		STAFF AS ADJUSTED	STAFF RECOMMENDED
1	Staff Adjusted Test Year Revenues - 2012	\$ 130,726	\$ 130,726
2	Weight Factor	2	2
3	Subtotal (Line 1 * Line 2)	\$ 261,452	\$ 261,452
4	Staff Recommended Revenue, Per Schedule BCA-1	155,490	178,381
5	Subtotal (Line 4 + Line 5)	\$ 416,942	\$ 439,833
6	Number of Years	3	3
7	Three Year Average (Line 5 / Line 6)	\$ 138,981	\$ 146,611
8	Department of Revenue Multiplier	2	2
9	Revenue Base Value (Line 7 * Line 8)	\$ 277,961	\$ 293,222
10	Plus: 10% of CWIP -	-	-
11	Less: Net Book Value of Licensed Vehicles	-	-
12	Full Cash Value (Line 9 + Line 10 - Line 11)	\$ 277,961	\$ 293,222
13	Assessment Ratio	22.5%	22.5%
14	Assessment Value (Line 12 * Line 13)	62,541	\$ 65,975
15	Composite Property Tax Rate (Obtained from Pima County)	12.201%	12.201%
16	Staff Proposed Property Tax Expense (Line 14 * Line 15)	\$ 7,588	
17	Company Proposed Property Tax	5,846	
18	Staff Test Year Adjustment (Line 16-Line 17)	\$ 1,742	
19	Property Tax - Staff Recommended Revenue (Line 14 * Line 15)		\$ 8,050
20	Staff Test Year Adjusted Property Tax Expense (Line 16)		\$ 7,631
21	Increase/(Decrease) to Property Tax Expense		\$ 419
22	Decrease to Property Tax Expense		\$ 419
23	Increase in Revenue Requirement		22,891
24	Decrease to Property Tax per Dollar Increase in Revenue (Line 19/Line 20)		1.83%

# Humboldt Water Company

Docket Nos. W-02197A-13-0115 and W-02197W-12-0410  
Test Year Ended: October 31, 2012

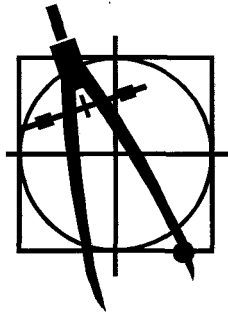
Schedule BCA-11

## Calculation of Income Tax:

1	Revenue (Schedule BCA-1)
2	Operating Expenses Excluding Income Taxes
3	Less: Synchronized Interest (L47)
4	Arizona Taxable Income (L36 - L37 - L38)
5	Arizona State Income Tax Rate
6	Arizona Income Tax (L42 x L43)
7	Federal Taxable Income (L42 - L44)
8	Federal Tax on First Income Bracket (\$1 - \$50,000) @ 15%
9	Federal Tax on Second Income Bracket (\$50,001 - \$75,000) @ 25%
10	Federal Tax on Third Income Bracket (\$75,001 - \$100,000) @ 34%
11	Federal Tax on Fourth Income Bracket (\$100,001 - \$335,000) @ 39%
12	Federal Tax on Fifth Income Bracket (\$335,001 - \$10,000,000) @ 34%
13	Total Federal Income Tax
14	Combined Federal and State Income Tax (L35 + L42)

## Calculations of Income Tax Allowance

With Surcharge Corporate Tax Calculation	Without Surcharge Corporate Tax Calculation	With Surcharge Filing Status (Married Filing Jointly) Calculation	Personal Without Surcharge
\$ 178,381	\$ 155,490		\$ 155,490
\$ 138,319	\$ 137,900		\$ 137,900
\$ 14,559	\$ 1,185.00		\$ 1,185
\$ 25,503	\$ 16,405	\$ 25,503	\$ 16,405
6.9680%			
\$ 1,777	\$ 1,143	\$25,503 x .0288-58	\$ 676
\$ 23,726	\$ 15,262	25,503	\$ 425
\$ 3,559	\$ 2,289		\$ 16,405
\$ -			
\$ -			
\$ -			
\$ -			
\$ 3,559	\$ 2,289	\$8,103 x 15% +1,740	\$ 2,955
\$ 5,336	\$ 3,432		\$ 3,631
			\$ 1,641
			\$ 2,065



By Del Smith

**ENGINEERING REPORT FOR  
Humboldt Water Systems, Inc.**

**Docket Nos.**  
**W-02197A-12-0410 (Financing)**  
**W-02197A-13-0115 (Rates)**

**September 6, 2013**

**CONCLUSIONS**

1. Arizona Corporation Commission ("ACC" or "Commission") Utilities Division Staff ("Utilities Staff" or "Staff") concludes that the Humboldt Water System, Inc. ("Humboldt" or "Company") water system has adequate production and storage capacity to serve the present customer base and reasonable growth.
2. Staff concludes that Humboldt's proposal to install a treatment system to reduce arsenic and nitrate concentrations in its water is appropriate. Staff concludes that installing an isolation valve in the distribution will aid the Company in addressing excessive water loss. Finally Staff concludes that the cost estimates listed in Table E are reasonable (see Section J Financing).
3. Humboldt's service area is located within the Arizona Department of Water Resources ("ADWR") Prescott Active Management Area. ADWR has determined that Humboldt is currently compliant with departmental requirements governing water providers and/or community water systems.
4. A check of the Utilities Division Compliance Section database indicates that there are currently no delinquent compliance items for Humboldt.
5. Humboldt has approved Curtailment and Backflow Prevention Tariffs on file with the Commission.

**RECOMMENDATIONS**

1. Arizona Department of Environmental Quality ("ADEQ") regulates the Humboldt water system under ADEQ Public Water System Identification ("PWS ID") # 13-052. According to Compliance Status Report, dated June 7, 2013, the Humboldt system has major deficiencies and ADEQ cannot determine if this system is currently delivering water that meets water quality standards required by 40 CFR 141 (National Primary

Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. Sample results from the Humboldt system have exceeded the Maximum Contaminate Levels ("MCLs") for Arsenic and for Nitrates. The Company is seeking a loan through the Water Infrastructure Finance Authority ("WIFA") to finance the engineering, procurement, installation and operation of a treatment plant to reduce arsenic and nitrate below the MCL. Staff recommends that the Company file with Docket Control, as a compliance item in this docket within 18 months of the effective date of the order in this matter, the ADEQ Approval of Construction for the arsenic/nitrate treatment system.

2. Staff recommends that the Company continue to coordinate the reading of its well meters and individual customer meters on a monthly basis and report this data in its Annual Reports going forward.<sup>1</sup> Staff further recommends that, in the event the water loss reported in any future Annual Report is greater than 10 percent, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to less than 10 percent. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted per this recommendation, shall be docketed as a compliance item no later than April 30 of the year following the excessive water loss.
3. Staff recommends an annual water testing expense of \$3,675 and miscellaneous annual certified operator water testing related expenses of \$315 be used for purposes of this application.
4. Staff recommends that the Company use the depreciation rates in Table B (see Section H Depreciation Rates).
5. Staff further recommends that the charges listed under "Staff's Recommendation" in Table C be adopted (see Section I Other Issues).
6. Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 45 days of the effective date of a decision in this proceeding, at least three Best Management Practices ("BMPs") in the form of tariffs that substantially conform to the templates created by Staff for Commission's review and consideration. The templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>.

Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

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<sup>1</sup> The Company shall collect the data needed to accurately complete the water use data sheets contained in the Annual Report form.



7. See Section I Other Issues for Staff recommendations regarding Post Test Year Plant Additions and National Association of Regulatory Utility Commissioners ("NARUC") Plant Account Adjustments.

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## **A. INTRODUCTION AND LOCATION OF COMPANY**

On September 20, 2012, Humboldt Water Systems, Inc. ("Humboldt" or "Company") filed an application with the Arizona Corporation Commission ("ACC" or "Commission") for financing approval to borrow \$160,000 from the Water Infrastructure Finance Authority ("WIFA") (Docket No.W-02197A-12-0410). The purpose of the loan is to fund the construction of nitrate and arsenic treatment facilities. The request was amended on May 6, 2013, to increase the authorization and borrow from WIFA up to \$300,000. On April 26, 2013, Humboldt filed a rate application requesting rates to, among other things, support the debt service on the requested WIFA loan (Docket No.W-02197A-13-0115). The Company's rate application was found sufficient on June 24, 2013. The Company's current schedule of rates and charges were approved in Decision No. 61529 dated February 19, 1999. The ACC Utilities Division Staff ("Utilities Staff" or "Staff") engineering review and analysis of these applications is presented in this report.

Humboldt has been classified as a Class D water utility company. During the test year which ended October 31, 2012, the Company had 315 metered connections.<sup>2</sup> The Company's water system serves the Town of Dewey-Humboldt<sup>3</sup> which is located on State Route 69 approximately 15 miles east of Prescott in Yavapai County, Arizona. Figure 1 shows the location of the Company within Yavapai County and Figure 2 shows the CC&N covering approximately four square miles.

## **B. DESCRIPTION OF THE WATER SYSTEM**

The Humboldt water system was visited on August 9, 2013, by Del Smith, of Utilities Staff, in the accompaniment of Mr. Timothy L. Kylo. Mr. Kylo is President of Humboldt. Mr. Brian Cunningham, who did not attend the inspection, is the Company's Certified Operator.<sup>4</sup> The yard at the Well Site was reasonably well maintained and generally free of old plant no longer in use. The in-service plant (i.e., well, tanks and visible pipe) appeared to be in proper working order. Staff did not observe any leaks at the well site or in the distribution area.

The Company owns two wells (Well #1; Arizona Department of Water Resources ("ADWR") Registration No. 55-533639 and Well #2; Registration No. 55-623784).<sup>5</sup> The Wells have a total pump yield of 125 to 130 gallons per minute ("GPM"). Well #1 feeds chlorinated water to one 65,000 gallon storage tank.<sup>6</sup> Water pressure in the water system is increased prior to being delivered to customers through a booster system consisting of two booster pumps (one

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<sup>2</sup> Per plant data submitted with the Application.

<sup>3</sup> Dewey-Humboldt was incorporated as a town on December 20, 2004.

<sup>4</sup> Mr. Cunningham is a Certified Grade 2 Water Distribution System Operator (expiration date September 30, 2015) and is a Certified Grade 2 Water Treatment Plant Operator (expiration date September 30, 2015), Arizona Department of Environmental Quality Operator Identification No.OP020066.

<sup>5</sup> The Humboldt water system relies solely on groundwater as its source of water.

<sup>6</sup> The water system has total storage capacity of 65,000 gallons.

variable speed 10 horsepower and one single speed 15 horsepower). The booster system is also equipped with a constant pressure surge tank. The distribution system consists of 34,700 feet of 2, 4 and 6-inch main lines.<sup>7</sup> Water level in the storage tank is manually controlled. A water system schematic is shown as Figure 3 and Table A includes a detailed plant facility listing.

**Table A. Plant Facilities Summary**

**Well Data**

	Well #1(Note 1)	Well #2 (Note 1)
ADWR Registration No.	55-533639	55-623784
Casing Diameter	8 inch	6 inch
Casing Depth	300 feet	150 feet
Pump Horsepower (HP)	10 HP	3 HP
Pump Yield	85 - 90 GPM	40 GPM
Meter Size	3 inch	2 inch
Year Drilled	1991	1982

Notes:

- 1) ADWR well registration records list Humboldt Water Systems, Inc. as the well owner.

**Booster System, Treatment, Security & Water Storage**

Structure or Equipment	Location	Quantity – Capacity, Size
Pressure Tank	Well Site	NA
Booster Pumps	Well Site	1 – 15 HP Single Speed 1 – 10 HP Variable Speed
Security Fencing	Well Site Enclosed	6 Foot Slatted Chain Link (equipped w/security wire)
Storage Tank	Well Site	1 – 65,000 Gallon
Treatment	Well Site	Chlorine Pump & Tank

Notes:

- 1) A 15 KW Solar System has been installed at the Well Site (used for net metering purposes).  
2) The booster pumps are installed in an 8' X 8' wood frame shed.

**Distribution Mains**

Diameter	Material	Length (feet)
2 inch	Steel & PVC	10,000
4 inch	PVC	16,500
6 inch	PVC	8,200
Total		34,700

<sup>7</sup> Per plant data submitted with the Application.

**Meters**

Size	Quantity
5/8 x 3/4 inch	185
3/4	123
1	2
1 1/2	1
2	4
Total	315

**Fire Hydrants**

Size/Description	Quantity
Standard	N/A

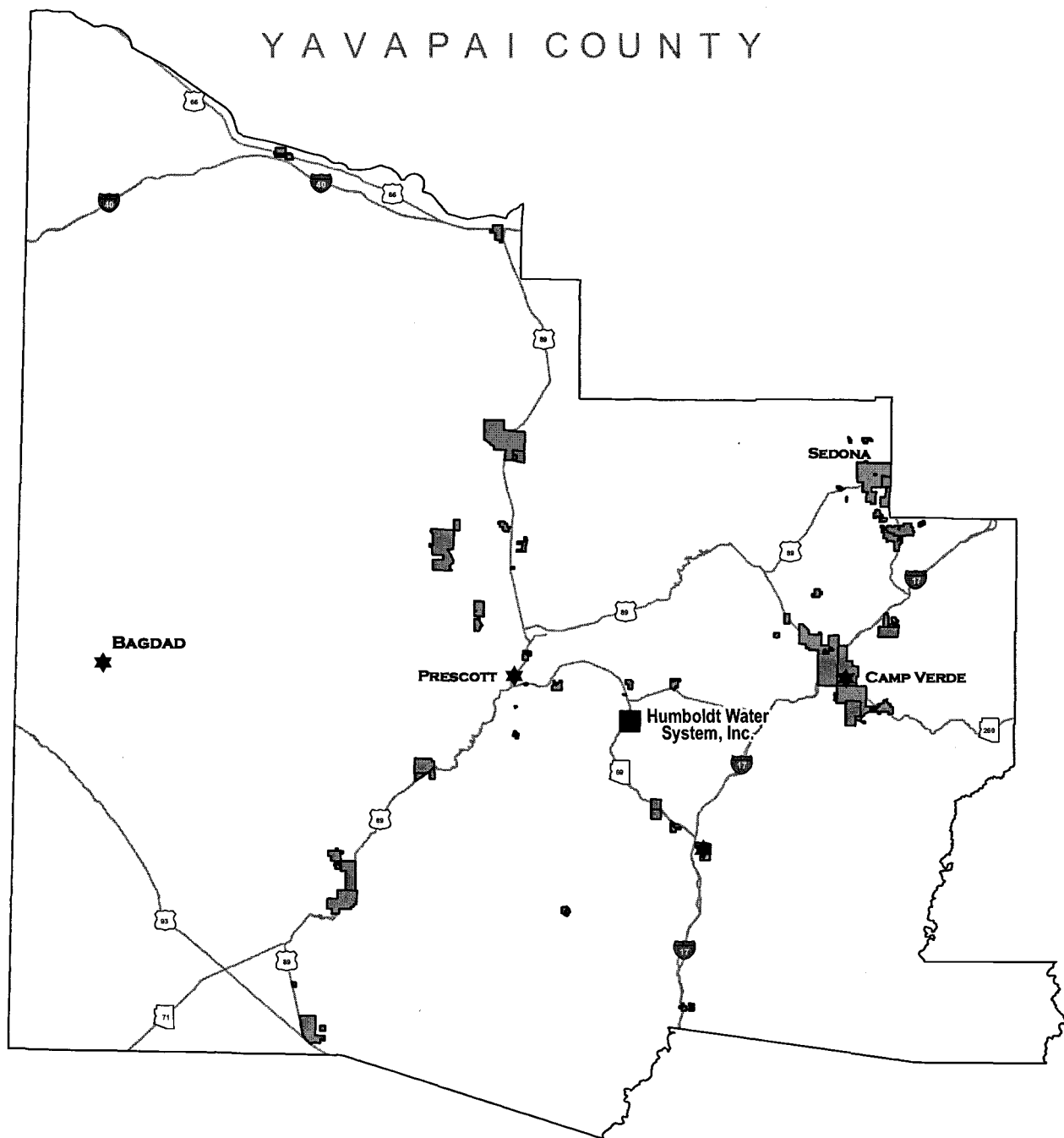


Figure 1. County Map

## Y A V A P A I C O U N T Y

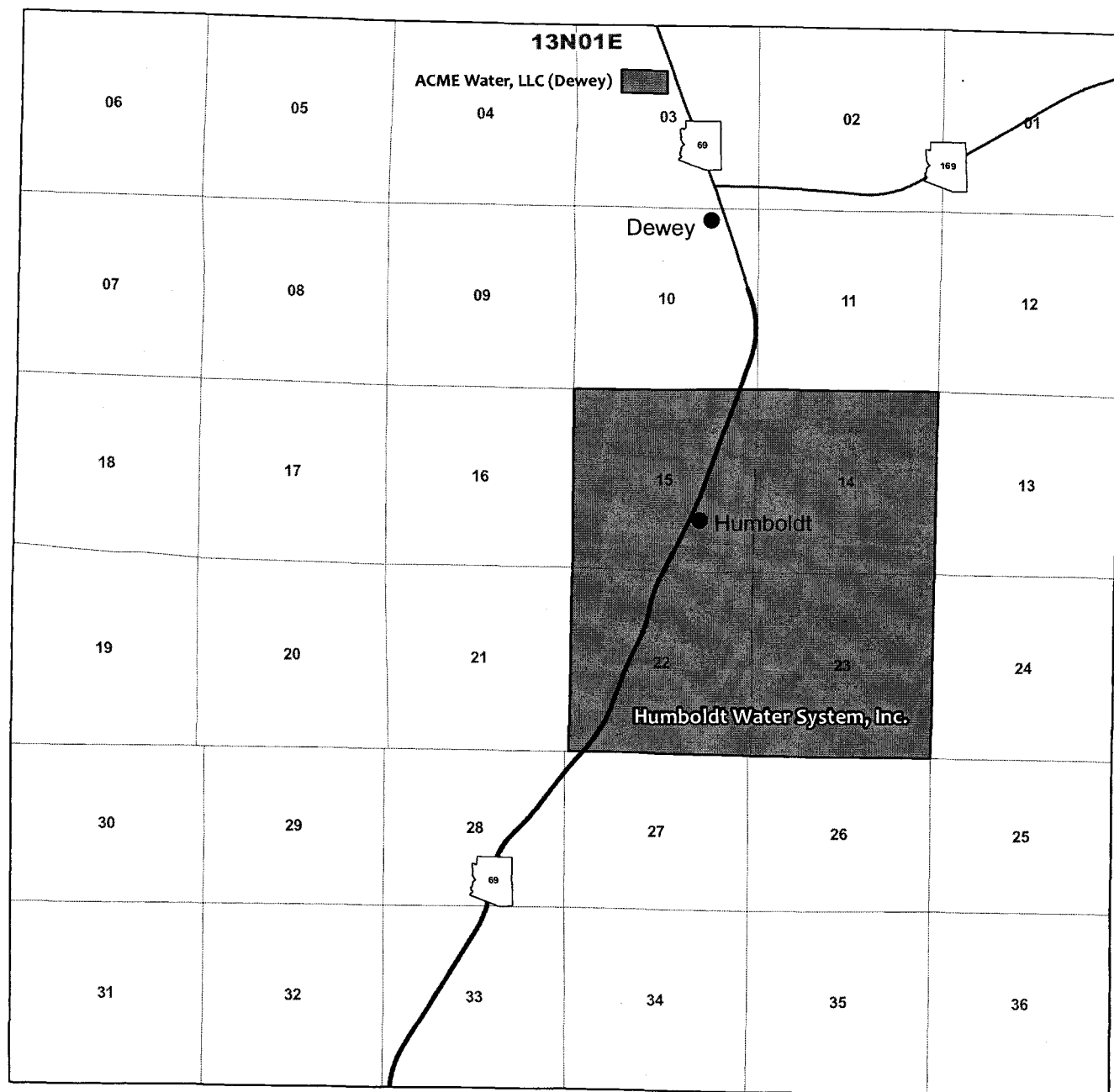
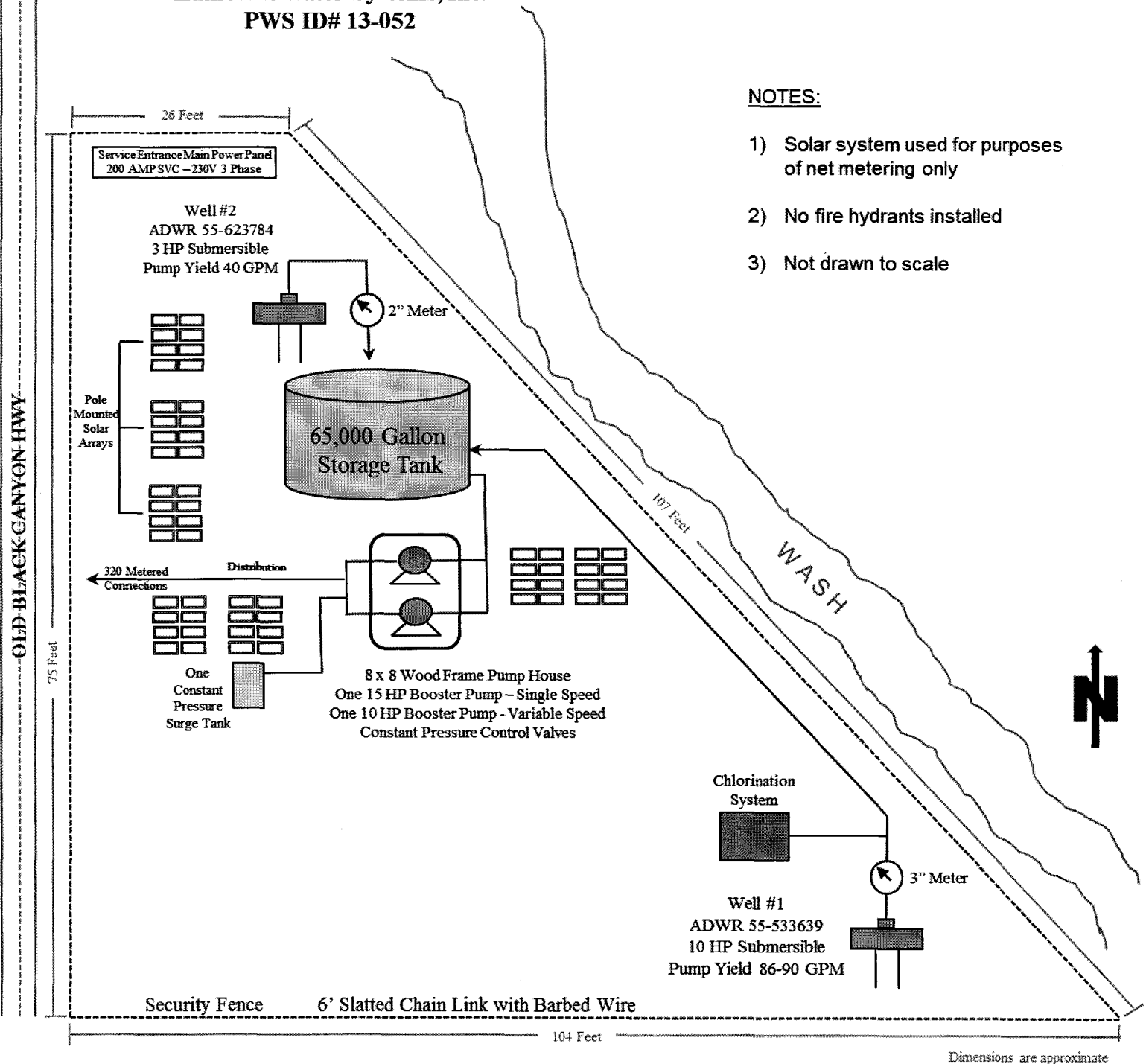


Figure 2. Certificated Area

**Water System Flow Schematic**  
**Humboldt Water Systems, Inc.**  
**PWS ID# 13-052**



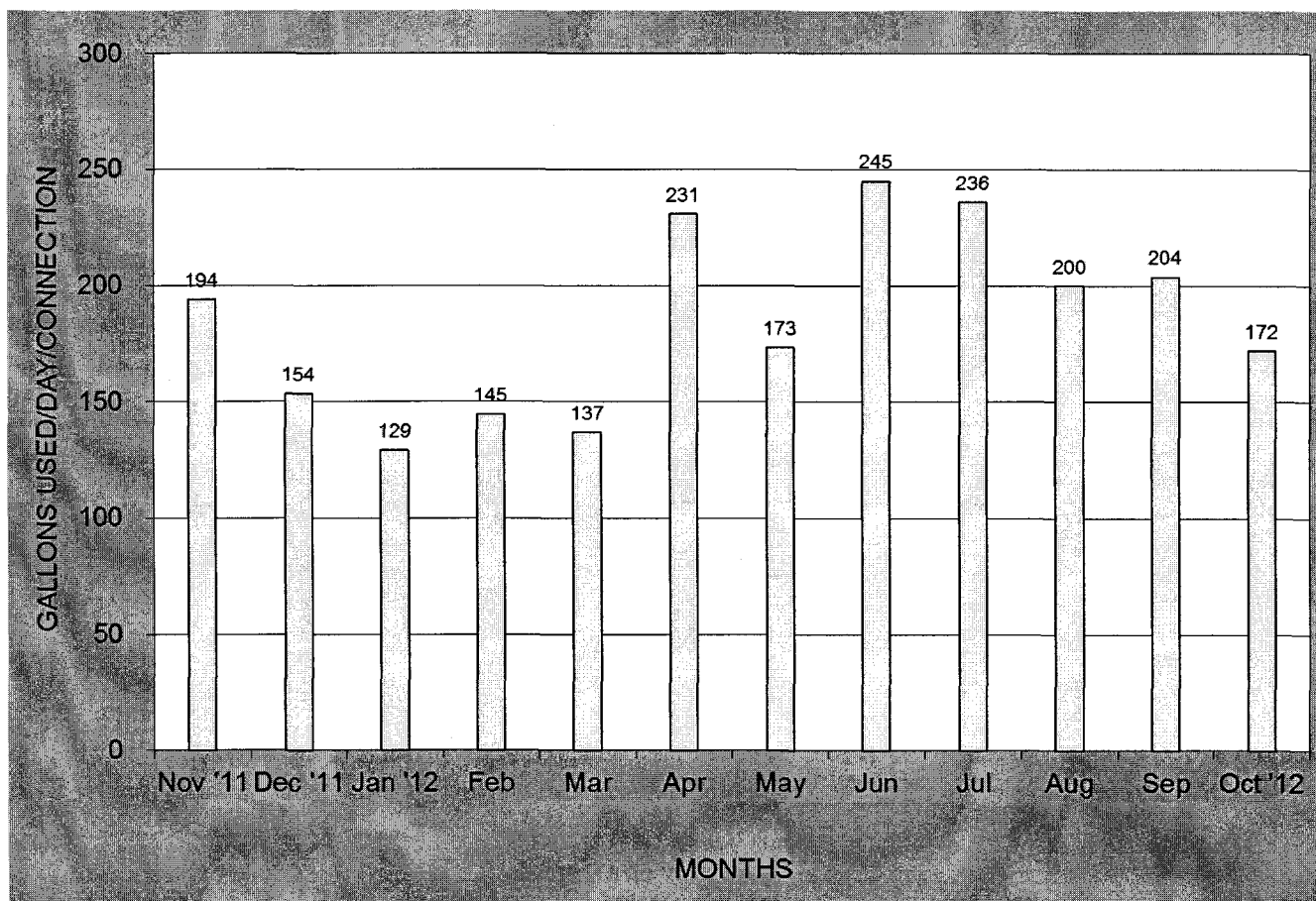
**Figure 3. Water System Schematic**



## C. WATER USE

### *Water Sold*

Figure 4 presents the water consumption data provided by Humboldt for the test year ending October 31, 2012. Customer consumption included a high monthly water use of 245 gallons per day (“GPD”) per connection in June, and the low water use was 129 GPD per connection in January. The average annual use was 185 GPD per connection. The Company reported 21,889,000<sup>8</sup> gallons of water sold during the test year.



**Figure 4. Water Use**

<sup>8</sup> Total water sold during the test year based on the monthly data.

### *Non-Account Water*

Non-account water should be 10 percent or less. It is important to be able to reconcile the difference between water sold and the water produced by the source. A water balance will allow a company to identify water and revenue losses due to leakage, theft and flushing.

The Company reported 24,705,000 gallons pumped and 21,889,000 gallons sold during the test year ending October 31, 2012, resulting in a water loss of 11.4 percent.

The following table shows that the Company's non-account water level has improved since 2010 when it was 18.1 percent. In the last two years it has averaged 11.5 percent which is just above the recommended threshold of 10 percent.

Table B. Non-Account Water

Year Ending 12/31	Gallons Sold	Gallons Pumped	Non-account Water (%)
2008	20,220,000	24,467,000	17.4
2009	21,991,000	25,506,000	13.8
2010	20,477,000	25,009,000	18.1
2011	22,002,000	24,797,000	11.3
2012	19,627,000	22,213,000	11.6

Staff recommends that the Company continue to coordinate the reading of its well meters and individual customer meters on a monthly basis and report this data in its Commission Annual Reports going forward.<sup>9</sup> Staff further recommends that, in the event the water loss reported in any future Annual Report is greater than 10 percent, the Company shall prepare a report containing a detailed analysis and plan to reduce water loss to less than 10 percent. If the Company believes it is not cost effective to reduce the water loss to less than 10 percent, it should submit a detailed cost benefit analysis to support its opinion. In no case shall the Company allow water loss to be greater than 15 percent. The water loss reduction report or the detailed analysis, whichever is submitted per this recommendation, shall be docketed as a compliance item no later than April 30 of the year following the excessive water loss.

### *System Analysis*

The Humboldt water system well production capacity is 125 GPM (well production varies and may be as much as 130 GPM) and the system has one 65,000 gallon storage tank. There are no fire hydrants in the distribution system. The water system was serving 327

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<sup>9</sup> The Company shall collect the data needed to accurately complete the water use data sheets contained in the Annual Report form.

customers during the peak month of June 2012 when the Company reported 2,404,000 gallons sold. Staff concludes that the Humboldt water system has adequate production and storage capacity to serve the present customer base and reasonable growth.

#### **D. GROWTH**

The number of metered connections served by the Company declined between 2006 and 2009 and only averaged one new connection per year after that. The Company reported 280 metered connections served in 2005 and 315 metered connections served in 2012.<sup>10</sup> Staff projects that the Company could be serving 327 connections by 2016.

#### **E. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (“ADEQ”) COMPLIANCE**

##### *Compliance*

ADEQ regulates the Humboldt water system under ADEQ Public Water System Identification (“PWS ID”) No. 13-052. According to the ADEQ Compliance Status Report, dated June 7, 2013, the Humboldt system has major deficiencies and ADEQ cannot determine if this system is currently delivering water that meets water quality standards required by 40 CFR 141 (National Primary Drinking Water Regulations) and Arizona Administrative Code, Title 18, Chapter 4. Sample results from the Humboldt water system have exceeded the Maximum Contaminate Levels (“MCLs”) for Arsenic and for Nitrates. The Company is seeking a loan through the Water Infrastructure Finance Authority (“WIFA”) to finance the engineering, procurement, installation and operation of a treatment plant to reduce arsenic and nitrate below the MCL (for further discussion see Section J – Financing).

ADEQ last inspected the Humboldt water system on April 17, 2012.<sup>11</sup> Operation and maintenance deficiencies were referenced in the inspection report. A Notice of Violation (“NOV”) was issued to Humboldt Water Systems Inc. on July 23, 2012. According to the Company, it has “corrected all the deficiencies in the July 23rd report. The only item that remains is the treatment plant and the Approval to Construct Application for the treatment plant which is the basis for the Financing Application”.<sup>12</sup>

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<sup>10</sup> Staff’s historical growth figures are based on the data reported by the Company in its annual reports submitted to the Commission.

<sup>11</sup> Drinking Water Inspection Report dated May 3, 2012.

<sup>12</sup> Per Tim Kylo’s email sent August 14, 2013.

*Water Testing Expense*

Humboldt is subject to mandatory participation in the ADEQ Monitoring Assistance Program ("MAP").<sup>13</sup> The Company reported water testing expenses of \$4,437.00 during the test which included \$1,300 for new source testing of the Company's two wells. Staff has reviewed and recalculated these expenses. Table A presents Staff's adjusted annual water testing expense.

**Table A. Water Testing Cost**

Monitoring	Cost per test (Note 2)	Quantity of tests per 3 years	Annual Testing Cost
Coliform (Monthly)	\$74	36	\$888
MAP	MAP	MAP	\$1,080 (Note 1)
Lead & Copper (Triennially)	\$45	10	\$150
DBPs (Triennially)	\$350	1	\$117 (rounded)
Arsenic (Quarterly/well)	\$80	24	\$640
Nitrate (Quarterly/well)	\$70	24	\$560
MRDL	\$20	36	\$240
Total Testing Cost	-	-	<b>\$3,675</b>

Notes: 1) The ADEQ MAP invoice for Calendar Year 2012 was \$1,080.11.  
2) Sampling costs were based in large part on the Yavapai Water Sampling invoices provided by the Company.

The Company reported miscellaneous certified operator water testing related expenses of \$315.<sup>14</sup> Staff recommends miscellaneous water testing related expenses of \$315 be used for purposes of this application.

**F. ADWR COMPLIANCE**

The Humboldt service area is located within the Prescott Active Management Area ("AMA"). ADWR has determined that Humboldt is currently compliant with departmental requirements governing water providers and/or community water systems.<sup>15</sup>

<sup>13</sup> The MAP program is mandatory for water systems, which serve less than 10,000 persons (approximately 3,300 service connections).

<sup>14</sup> Includes certified operator fees for shipping, customer noticing and report preparation.

## **G. ACC COMPLIANCE**

A check of the Utilities Division Compliance Section database indicates that there are currently no delinquent compliance items for Humboldt.<sup>15</sup>

## **H. DEPRECIATION RATES**

Humboldt has been using lower depreciation rates (and longer plant lives) than Staff typically recommends in several key plant accounts. In Account No. 311 (Pumping Equipment) and in Account No. 334 (Meters) the Company applied lower test year depreciation rates than Staff typically recommends. Staff's typical and customary depreciation rates which vary by National Association of Regulatory Utility Commissioners ("NARUC") plant category are presented in Table B. Staff recommends that the Company use the depreciation rates in Table B on a going forward basis. The Company has indicated agreement with Staff's recommended depreciation adjustments.

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<sup>15</sup> Per ADWR Water Provider Compliance Report dated May 1, 2013.

<sup>16</sup> Per ACC Compliance Section email dated May 3, 2013.

**Table B. Depreciation Rate Table for Water Companies**

NARUC Acct. No.	Depreciable Plant	Average Service Life (Years)	Annual Accrual Rate (%)
304	Structures & Improvements	30	3.33
305	Collecting & Impounding Reservoirs	40	2.50
306	Lake, River, Canal Intakes	40	2.50
307	Wells & Springs	30	3.33
308	Infiltration Galleries	15	6.67
309	Raw Water Supply Mains	50	2.00
310	Power Generation Equipment	20	5.00
<b>310.1</b>	<b>Solar System</b>	<b>15</b>	<b>6.67</b>
<b>311</b>	<b>Pumping Equipment</b>	<b>8</b>	<b>12.5</b>
320	Water Treatment Equipment		
320.1	Water Treatment Plants	30	3.33
320.2	Solution Chemical Feeders	5	20.00
320.3	Point-of-Use Treatment Devices	10	10.00
330	Distribution Reservoirs & Standpipes		
330.1	Storage Tanks	45	2.22
330.2	Pressure Tanks	20	5.00
331	Transmission & Distribution Mains	50	2.00
333	Services	30	3.33
<b>334</b>	<b>Meters</b>	<b>12</b>	<b>8.33</b>
335	Hydrants	50	2.00
336	Backflow Prevention Devices	15	6.67
339	Other Plant & Misc Equipment	15	6.67
340	Office Furniture & Equipment	15	6.67
340.1	Computers & Software	5	20.00
341	Transportation Equipment	5	20.00
342	Stores Equipment	25	4.00
343	Tools, Shop & Garage Equipment	20	5.00
344	Laboratory Equipment	10	10.00
345	Power Operated Equipment	20	5.00
346	Communication Equipment	10	10.00
347	Miscellaneous Equipment	10	10.00

## I. OTHER ISSUES

### 1. Service Line and Meter Installation Charges

Humboldt proposed an increase in the amount it would charge going forward for service line and meter installations.<sup>17</sup> The charges the Company proposed are slightly above the upper end of Staff's typical range for these charges however Staff believes the Company's proposed charges are still reasonable and, service line and meter installation charges are refundable advances. Since the Company may at times install meters on existing service lines, it would be appropriate for some customers to only be charged for the meter installation. Therefore, separate service line and meter charges have been developed by Staff. The Company's proposed charges were used to develop the separate service line and meter installation charges included in Table C. Staff recommends that meter sizes 3-inches and larger be priced on an individual case basis at cost. Staff further recommends that the charges listed under "Staff's Recommendation" in Table C be adopted.

**Table C. Service Line and Meter Installation Charges**

Meter Size	Company Current Tariff	Company Proposed			Staff's Recommendation		
		Service Line Charge	Meter Charge	Total Charge	Service Line Charge	Meter Charge	Total Charge
5/8 x 3/4-inch	\$330	-	-	\$660	\$490	\$170	\$660
3/4-inch	\$375	-	-	\$660	\$420	\$240	\$660
1-inch	\$440	-	-	\$880	\$538	\$342	\$880
1-1/2-inch	\$660	-	-	\$1200	\$614	\$586	\$1200
2-inch Turbine	\$1155	-	-	\$2500	\$1107	\$1393	\$2500
2-inch Comp	-	-	-	-	-	-	-
3-inch Turbine	\$1625	-	-	\$3500	-	-	ICB*
3-inch Comp	-	-	-	-	-	-	-
4-inch Turbine	\$2540	-	-	\$4250	-	-	ICB *
4-inch Comp	-	-	-	-	-	-	-
6-inch Turbine	\$4875	-	-	\$6500	-	-	ICB *
6-inch Comp	-	-	-	-	-	-	-

\* At cost

### 2. Curtailment Tariff

Humboldt has an approved Curtailment Tariff on file with the Commission. This tariff became effective June 30, 2013.

<sup>17</sup> The Company's current charges were approved in Decision No. 61529 dated February 19, 1999.

### *3. Backflow Prevention Tariff*

Humboldt has an approved Backflow Prevention Tariff on file with the Commission. This tariff became effective June 21, 2013.

### *4. Best Management Practices ("BMP") Tariff*

Staff recommends that the Company file with Docket Control, as a compliance item in this docket and within 45 days of the effective date of a decision in this proceeding, at least three BMPs in the form of tariffs that substantially conform to the templates created by Staff for Commission's review and consideration. The templates created by Staff are available on the Commission's website at <http://www.azcc.gov/Divisions/Utilities/forms.asp>.

Staff further recommends that a maximum of two BMPs may come from the "Public Awareness/Public Relations" or "Education and Training" categories. The Company may request cost recovery of the actual costs associated with the BMPs implemented in its next general rate application.

### *5. Post Test Year Plant Additions*

Humboldt has experienced the following post-test year plant additions.

**Table D. Post -Test Year Plant Additions**

Post-test Year Plant	Billing Date	Cost
Improvements (well pump replaced) to Well #2	February 2013	\$2841.95
Improvements (well and booster pumps replaced) to Well #1	July 2013	\$17,339.05
Total		\$20,181

During its site inspection Staff verified that the plant listed in Table D above had been placed in-service and was available and being used to serve customers.

### *6. NARUC Plant Account Adjustments – Solar System*

The \$79,092 invested in Solar Generating Plant should be moved out of Account No. 339 (Other Plant & Misc. Equipment) and placed in a new Sub-Account No. 310.1 (Power Generation Equipment - Solar System).



## J. FINANCING (DOCKET NO. W-02197A-12-0410)

### *Nitrate and Arsenic Treatment Plant*

On September 20, 2012, Humboldt filed with the Commission a financing application requesting authority to incur long term debt in the amount of \$160,000 to fund the engineering, procurement, installation and operation of a treatment plant to reduce Nitrate and Arsenic below the MCL prescribed by the EPA and ADEQ. The Company received an NOV from ADEQ regarding both contaminants.

### *New Booster Station and Isolation Valves*

On May 6, 2013, the Company amended its financing application requesting authority to incur long term debt in the amount of \$300,000 (an increase of \$140,000). The additional funding was needed to fund the construction of a new building to house the treatment plant. Also the scope of the project was expanded to include a new booster station and isolation valve installations in the distribution system.

### *Project Cost Information*

A general description and breakdown of the funding required is as follows:

**Table E. Finance Related Capital Costs**

Description	Company			
	Unit Cost (Note 1)	# of Units	Total	Staff's Adjustment
<b>Arsenic Treatment Plant</b>				
SE-100 Pressure Media Filter	\$70,864	1		
Startup & Misc	\$6,100	1		
Subtotal			\$76,964	
<b>Nitrate Treatment Plant</b>				
SE-100 Ion Exchange System	\$70,864	1		
Startup	\$6,100	1		
Subtotal			\$76,964	
<b>Arsenic/Nitrate Treatment Plant Subtotal</b>	\$153,928	-		
<b>Engineering and Permits</b>		-	\$20,000	
<b>Building to House Treatment Plant</b>		1	\$45,600	
<b>Plumbing and Electrical for Treatment System</b>		-	\$12,500	
<b>Arsenic/Nitrate Treatment Total</b>	\$232,028	-		

<b>Booster Station</b>				
Goulds Aqua Force 3 Pump System or equivalent		1	\$63,500	
<b>Isolation Valves in Distribution System</b>				
8 valves	\$750	8	\$6,000	
<b>Total</b>			\$301,528	

Notes:

1. Based on cost estimates and bids listed in Company's response to DS1.1 received June 19, 2013.

Staff concludes that Humboldt's proposal to install a treatment system to reduce arsenic and nitrate concentrations in its water is appropriate. Staff concludes that installing an isolation valve in the distribution system will aid the Company in addressing excessive water loss. Finally Staff concludes that the cost estimates listed in the table above are reasonable. However, no "used and useful" determination of the proposed project items were made and no particular treatment should be inferred for rate making or rate base purpose in the future.

Staff recommends that the Company file with Docket Control, as a compliance item in this docket within 18 months of the effective date of the order in this matter, the ADEQ Approval of Construction for the arsenic/nitrate treatment system.